

SCOPING STUDY

KY 884

Three Springs Road

Warren County, Kentucky

William H. Natcher Parkway to US 231

Item #3-102.00

Prepared for

Kentucky Transportation Cabinet
Department of Highways
Division of Planning



June 2002

EXECUTIVE SUMMARY

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The proposed highway project is located between the William H. Natcher Parkway and Scottsville Road (US 231) in Warren County in the southwestern portion of the state. The project is identified in the Kentucky Transportation Cabinet's (KYTC) *Approved 2000-2002 Biennial Highway Construction Program and Identified Preconstruction Program Plan for FY 2003 through FY 2006* (generally referred to as the Six Year Highway Plan) as a Scoping Study to evaluate the need for transportation improvements to Three Springs Road (KY 884).

Project Goals

Goals established for this project include: 1) reduce congestion delays; 2) improve safety by reducing conflict points and improving roadway geometry; 3) enhance recreation and tourism; 4) provide bicycle and pedestrian facilities where possible; and 5) provide connectivity with existing plans for future transportation improvements in the Bowling Green area.

Traffic Considerations

The existing traffic volumes along KY 884 in the study area range from 5,760 vehicles per day (vpd) just north of the William H. Natcher Parkway to 9,910 vpd near US 231. Most roadways in the study area, including KY 884, currently operate at LOS C or better. Permits on file with the Bowling Green City-County Planning Commission may potentially account for a total of 2,901 new residential dwelling units and 385,000 square feet of commercial space along KY 884.

In the Year 2025, traffic conditions along KY 884 are expected to range from 14,600 vpd (LOS D/E) just north of the William H. Natcher Parkway to nearly 27,000 vpd (LOS F) near the intersection of US 231. These volumes and operational conditions represent the most realistic future scenario for the KY 884 corridor, and should be considered the design volumes for future improvement options.

Identified Issues

Throughout the course of this Scoping Study, local citizens, public officials and interest groups were given the opportunity to provide input for the study. Based on comments and discussions from the local involvement meetings, there is local support for improvements to KY 884; however, the public also acknowledged that only so much can be done to improve this route, and that a lower level of service may be acceptable to keep speeds down in the residential portions of the corridor and minimize property impacts. Identified concerns include:

- Congestion related to increasing traffic, existing and future developments along the corridor, lack of alternative routes in the area, and the US 231 intersection;
- Roadway safety issues including narrow lanes, shoulder obstructions, lack of turning lanes, poor sight distance, large vehicles, and non-compliance with the 35 mph speed limit;
- Pedestrian and bicycle safety issues and lack of facilities for non-motorized transportation, particularly in the commercial, residential and park areas;
- Property concerns related to the value and/or loss of residential and commercial property based on additional right-of-way requirements for roadway improvements;
- Environmental issues such as wetlands areas and karst formations along the corridor; and,

- The need to advance the project so that future phases may be undertaken as soon as possible.

Through the public involvement process, business owners along KY 884 identified preferences for improvements to the route. Many feel that a continuous turn-lane would be more effective than the installation of isolated turning bays; however, they are also concerned that the right-of-way requirements may impact property or access. Sidewalks were not considered to be a priority as the business owners have few pedestrian customers and are concerned about losing frontage property.

Residents of the KY 884 corridor are also concerned about private land that may be taken for improvements to KY 884. Agricultural land should be avoided to the same degree as land developed with homes and businesses. Improvements should be made along the existing alignment to minimize right-of-way needs. Bicycle and/or pedestrian facilities were seen as an advantage by some due to the potential for increased safety; however, others indicated such facilities would go unused and require additional right-of-way.

Environmental Overview

Environmental concerns and issues identified within 1,000 feet on either side of the existing alignment include:

- The study area is characterized by rolling karst topography, including two (2) large groundwater basins; therefore, water quality issues should be considered in future phases of this study.
- Six (6) wetland areas occur in the study area, two (2) of which are not shown on National Wetlands Inventory (NWI) mapping. Field inspections of each of these wetlands will likely be necessary to determine their boundaries and jurisdictional status.
- Suitable habitat is found within the study area for two (2) special concern species monitored by the Kentucky State Nature Preserves Commission (yellow-crowned night-heron and Bewick's wren -birds) and two (2) federally endangered species (Indiana bat and gray bat).
- Important community facilities exist in the corridor including Three Springs Road Church of Christ, Three Springs Baptist Church, the Commission for Children with Special Healthcare Needs, and Basil W. Griffin Park, a potential Section 4(f) resource.
- There are no National Register of Historic Places listings in the project corridor. Previous surveys indicate that the project area may include unrecorded archaeological sites. Two (2) historic properties along the corridor are recorded on the Kentucky Heritage Council maps as being more than 50 years old; however, no other information is available about these properties.
- Potential UST/Hazmat sites are known to be present along Three Springs Road within the study area (see **Figures 6 and 7**).

Improvement Options

Through the course of this Scoping Study, five improvement options, including no-build, were considered for the KY 884 corridor. Evaluation criteria included traffic considerations, environmental issues, cost estimates and public input.

- Alternate 1 – No improvements to KY 884. This alternate avoids the sensitive areas along KY 884, but may not meet the future traffic needs along the route. Planned residential and commercial developments in the project area are expected to lead to traffic growth and increased congestion along KY 884.

- Alternate 2 – Three-lanes between Flealand and US 231, with turning bays at major entrances from the William H. Natcher Parkway to Flealand. This alternate minimizes environmental and right-of-way impacts in the southern part of the study area, but does not address future traffic increases due to planned development in this area.
- Alternate 3 – Three-lane improvements from the William H. Natcher Parkway to US 231. Alternate 3 provides improved operational conditions, particularly in the southern portion of the corridor where traffic volumes are somewhat lower, and would require less right-of-way than the 5-lane options.
- Alternate 4 – Five-lane improvements between Flealand and US 231, with 3-lane improvements from the William H. Natcher Parkway to Flealand. The 5-lane improvements for the northern section of the corridor in Alternate 4 are expected to provide better operational conditions, yet are expected to impact additional properties in this area.
- Alternate 5 – Five-lane improvements from the William H. Natcher Parkway to US 231. The future year traffic demand supports the need for Alternate 5, yet the existing land use constraints and potentially prohibitive costs indicate that it may not be a reasonable improvement option.

Based on future traffic needs and reasonable cost constraints, the build options were narrowed to two: Alternate 3 and Alternate 4. Alternate 4 provides a better future scenario from the operational standpoint, yet has a greater impact on adjacent properties and a higher cost estimate. Alternate 3 does not provide typically acceptable levels of service (LOS D) in the northern portion of the corridor, but has fewer potential impacts to adjacent features. For these reasons, it is recommended that both options be moved forward to the next phase of this project.

Improvement of capacity along KY 884 may require other system connections and improvements in the area, such as the proposed Southwest Parkway. Local efforts should also be taken to establish development controls or impact fees to provide additional ways to maintain capacity along area roadways. Intelligent Transportation System (ITS) improvements may also be considered along the KY 884 corridor and within the project area.

With no future phases scheduled for this project in the Six Year Highway Plan, the programming of additional funds will be required to complete project development activities.

Other Project Issues

Other project issues identified through this study include:

- Improvement of capacity along the KY 884 route may require other system connections and improvements in the area, such as the Southwest Parkway. Local efforts to encourage urban planning, development controls, and access management could reduce further impacts along KY 884 and other routes in the Bowling Green area.
- The coordination and connectivity of bicycle and pedestrian facilities should be included in this project as recommended in Bowling Green's Greenbelt Master Plan. Citizens and community leaders have stressed the importance to having such recreational amenities and alternative travel routes.
- Project activities should include mitigation measures to reduce highway runoff and contaminants in the subsurface drainage systems. Significant rock cuts and embankments are not anticipated and sufficient limestone is not expected for highway uses.